



FOR GENERATIONS

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April 22, 2010

Ms. Erica M. Hamilton
Commission Secretary
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Ms. Hamilton:

**RE: British Columbia Utilities Commission (BCUC)
British Columbia Hydro and Power Authority (BC Hydro)
Annual Reporting of Reliability Indices
(Annual Response to Directive 26 of BCUC Decision on F2005/F2006
Revenue Requirements Application (F05/F06 RRA))**

BC Hydro is writing to the BCUC to provide its annual reporting of reliability indices, in compliance with Directive 26 of the BCUC's decision on BC Hydro's F05/F06 RRA.

BC Hydro submitted its initial compliance filing for Directive 26 in September 2005, and subsequently reported the available reliability indices in May 2006 as part of the F2007/F2008 RRA. BC Hydro filed annual reports to the BCUC on these reliability indices in May 2007, May 2008, and April 2009.

In this filing, BC Hydro is providing reliability indices for distribution performance through F2009 and generation performance through F2010.

Directive 26 of the F05/F06 RRA Decision

"The Commission Panel expects BC Hydro and BCTC to present their reliability indices (SAIFI, SAIDI, CAIDI, ASAI, SARI, MAIFI, generation forced outages, availability, and generation outage rates) both combined and disaggregated (where applicable) on an annual basis with comparisons to CEA averages."

Distribution Performance Update

The most recent annual Canadian Electricity Association (CEA) report includes the 2009 Annual Service Continuity Report on Distribution System Performance in Electrical Utilities. The comparative information for BC Hydro is provided in Attachment 1 both overall and disaggregated for the distribution system.

Generation Performance Update

In past filings, BC Hydro presented generation reliability statistics on a calendar year basis. As a result of changing the system by which generation reliability statistics are recorded, as of April 1, 2009 BC Hydro is providing generation statistics on a fiscal year basis. CEA calendar year data will be provided for comparison, as is done with BC Hydro distribution reliability statistics.

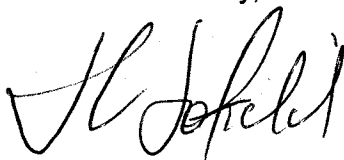
The most recent annual CEA report on generation performance is the 2007 Generation Equipment Status Annual Report. CEA data on generation performance for the 2008 and 2009 calendar years are not yet available. The CEA generation data (2007 and earlier) along with BC Hydro's reliability indices through F2010 are presented in tabular and graphical form in Attachment 2. The CEA Generation Equipment Status Annual Report includes only internal outages (i.e., generation-caused outages); therefore, for comparison purposes, the BC Hydro generation reliability data are reported in the same manner.

System Performance

Please note the SARI performance measure is not currently used for the BC Hydro portion of system performance, and BCTC files its reliability indices independently with the BCUC.

For further information, please contact Guy Leroux at 604 623-3696.

Yours sincerely,



Joanna Sofield
Chief Regulatory Officer

Enclosure

**Annual Reporting of Reliability Indices
(Annual Response to Directive 26 of BCUC
Decision on F05/F06 RRA)**



Attachment

1

Distribution Indices

**Annual Reporting of Reliability Indices
(Annual Response to Directive 26 of BCUC Decision on F05/F06 RRA)
Attachment 1 - Distribution Indices**

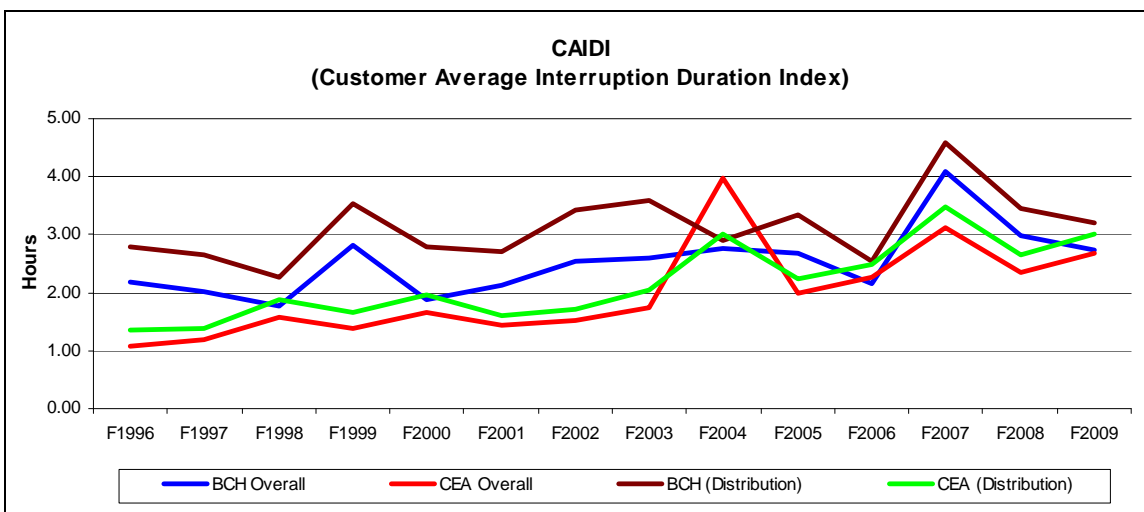
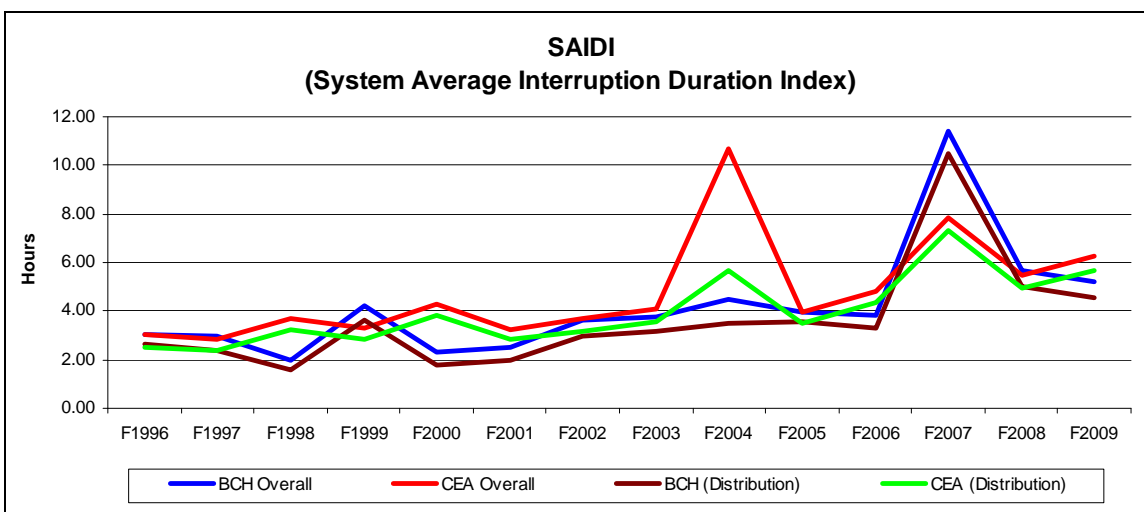
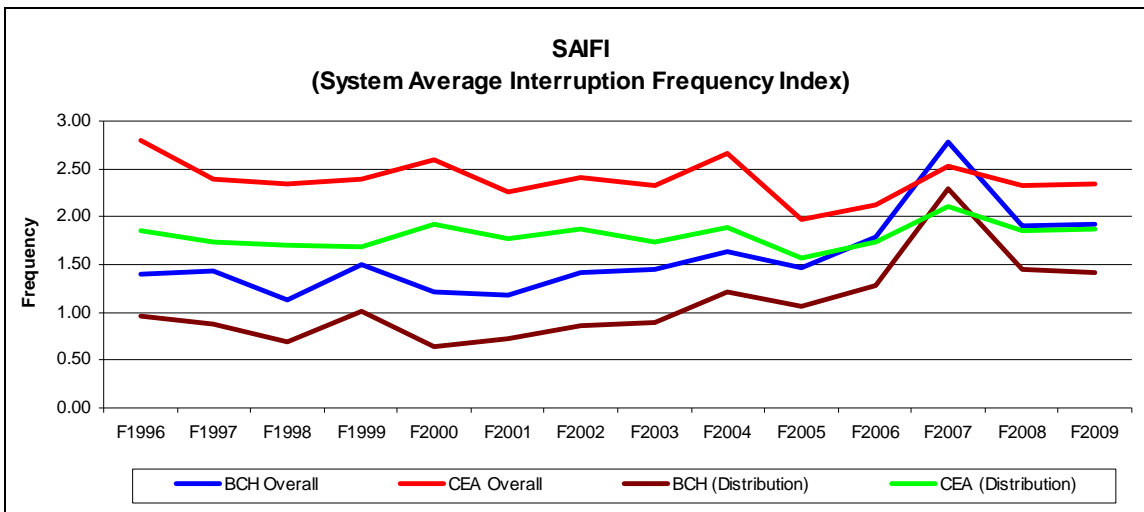
Table 1 Reliability Indices – BC Hydro Overall and CEA Overall

Year	BC Hydro Overall				CEA Overall			
	SAIFI	SAIDI	CAIDI	ASAI (%)	SAIFI	SAIDI	CAIDI	ASAI (%)
F1997	1.43	2.95	2.03	99.966	2.39	2.86	1.20	99.967
F1998	1.13	2.00	1.76	99.977	2.35	3.70	1.57	99.958
F1999	1.50	4.23	2.82	99.952	2.40	3.32	1.38	99.962
F2000	1.21	2.28	1.88	99.974	2.59	4.31	1.67	99.951
F2001	1.18	2.51	2.13	99.971	2.26	3.23	1.43	99.963
F2002	1.41	3.60	2.55	99.959	2.41	3.67	1.52	99.958
F2003	1.45	3.77	2.60	99.957	2.33	4.06	1.74	99.954
F2004	1.63	4.51	2.77	99.949	2.67	10.65	3.99	99.878
F2005	1.47	3.96	2.69	99.955	1.98	3.95	2.00	99.955
F2006	1.78	3.82	2.15	99.956	2.13	4.80	2.26	99.945
F2006	1.78	3.82	2.15	99.956	2.13	4.80	2.26	99.945
F2007	2.78	11.40	4.09	99.870	2.53	7.85	3.11	99.910
F2008	1.90	5.68	2.99	99.935	2.32	5.47	2.36	99.938
F2009	1.92	5.24	2.73	99.940	2.34	6.29	2.69	99.928

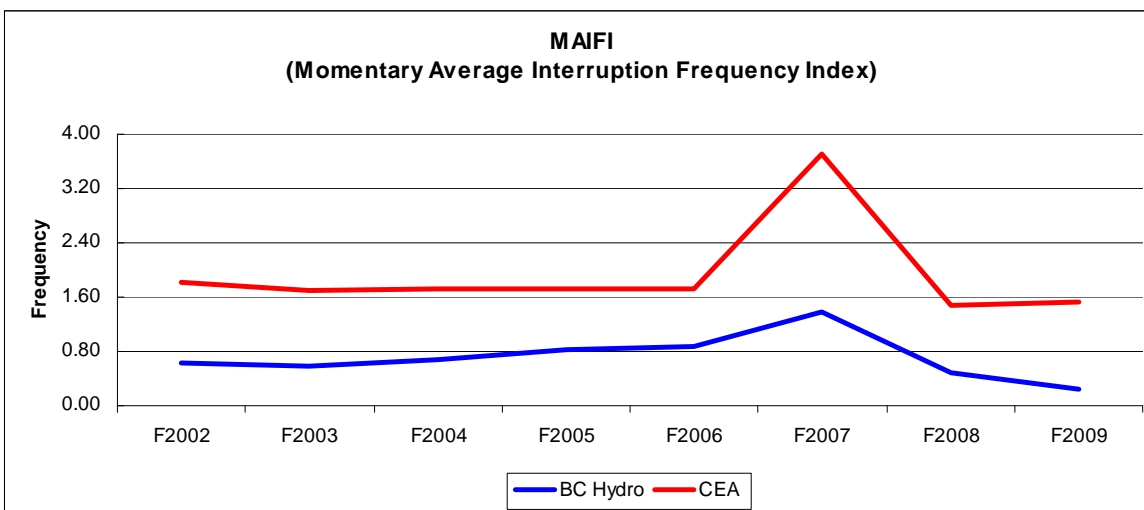
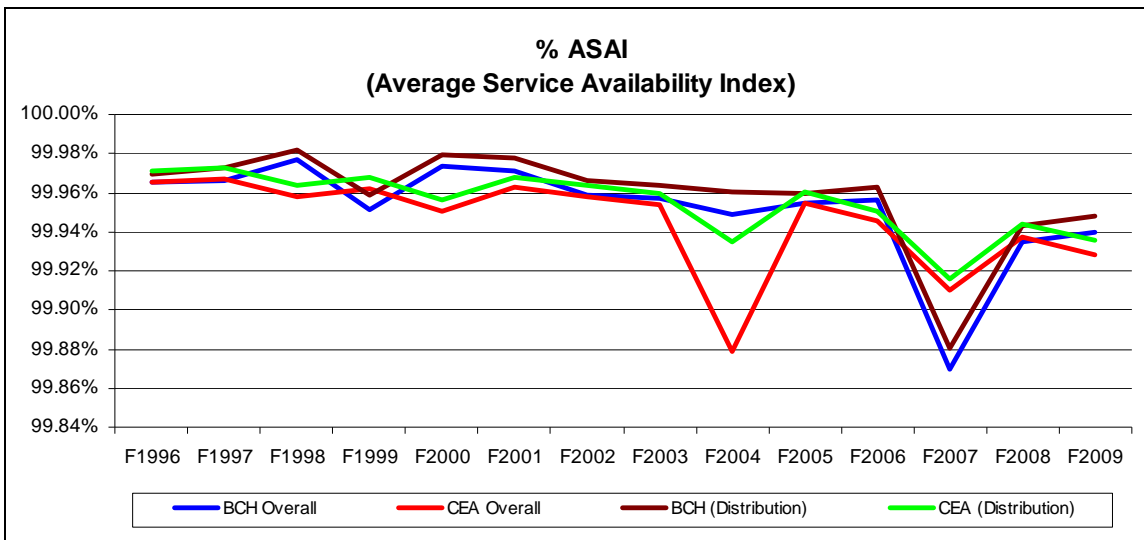
Table 2 Reliability Indices – BC Hydro (Distribution) and CEA (Distribution)

Year	BC Hydro (Distribution)				CEA (Distribution)			
	SAIFI	SAIDI	CAIDI	ASAI(%)	SAIFI	SAIDI	CAIDI	ASAI(%)
F1997	0.88	2.35	2.64	99.973	1.74	2.39	1.38	99.973
F1998	0.70	1.60	2.28	99.982	1.70	3.21	1.87	99.963
F1999	1.02	3.61	3.54	99.959	1.69	2.82	1.67	99.968
F2000	0.65	1.80	2.78	99.979	1.93	3.80	1.97	99.957
F2001	0.73	1.98	2.72	99.977	1.77	2.83	1.60	99.968
F2002	0.86	2.94	3.43	99.966	1.86	3.19	1.71	99.964
F2003	0.89	3.18	3.59	99.964	1.74	3.55	2.03	99.960
F2004	1.21	3.50	2.89	99.960	1.89	5.69	3.01	99.935
F2005	1.06	3.57	3.35	99.959	1.56	3.49	2.24	99.960
F2006	1.25	3.27	2.61	99.963	1.74	4.33	2.49	99.951
F2007	2.29	10.49	4.58	99.880	2.11	7.35	3.49	99.916
F2008	1.45	5.01	3.44	99.943	1.86	4.94	2.66	99.944
F2009	1.42	4.54	3.21	99.946	1.88	5.65	3.01	99.936

**Annual Reporting of Reliability Indices
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Attachment 1 - Distribution Indices**



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Note: The customer momentary interruptions and the resulting MAIFI may not apply to the utility's total customer population in the CEA comparison. Momentary outages are any interruptions on the feeders of less than one minute duration, caused by disturbance on the distribution, substation or transmission system.

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Attachment

2

Generation Reliability Indices

**Annual Reporting of Reliability Indices
(Annual Response to Directive 26 of BCUC Decision on F05/F06 RRA)
Attachment 2 - Generation Reliability Indices**

Generation Reliability Indices

Fiscal Year	BC Hydro Hydroelectric Units				Calendar Year	CEA Hydroelectric Units			
	Availability Factor	Forced Outage Count (Including starting failures) (Internal)**	Forced Outage Factor (Including starting failures) (Internal)**	Failure Rate		Availability Factor	Forced Outage Count (Including starting failures) (Internal)**	Forced Outage Factor (Including starting failures) (Internal)**	Failure Rate
F1999	89.82	2.99	1.90	2.97	C1998	90.33	3.31	1.40	2.79
F2000	90.06	3.29	2.48	3.31	C1999	91.87	3.56	1.60	2.64
F2001	91.57	3.81	1.14	3.71	C2000	90.60	3.33	1.42	2.34
F2002	88.96	3.58	1.16	3.65	C2001	91.25	3.09	1.18	2.26
F2003	89.82	3.12	1.07	3.13	C2002	91.71	3.05	1.51	2.36
F2004	88.71	3.18	1.60	3.15	C2003	91.39	3.21	1.34	2.37
F2005	89.05	2.64	2.30	2.77	C2004	91.21	3.06	1.48	2.39
F2006	90.52	2.51	0.93	2.14	C2005	90.17	3.18	1.62	2.33
F2007	88.65	2.05	1.62	2.01	C2006	90.23	2.84	1.79	2.14
F2008	85.82	2.21	2.90	2.14	C2007	92.21	2.49	1.84	1.97
F2009	85.60	1.99	5.21	2.07	C2008	n/a	n/a	n/a	n/a
F2010	84.73	2.10	2.18	2.27	C2009	n/a	n/a	n/a	n/a

Definitions (per the Canadian Electrical Association)

Availability Factor = $\frac{\text{Operating Time} + \text{Available-But-Not-Operating Time}}{\text{In Commercial Service Time}^*}$

Forced Outage Count = Average Number of Forced Outages / Unit / Year (including Starting Failures)(Internal)**

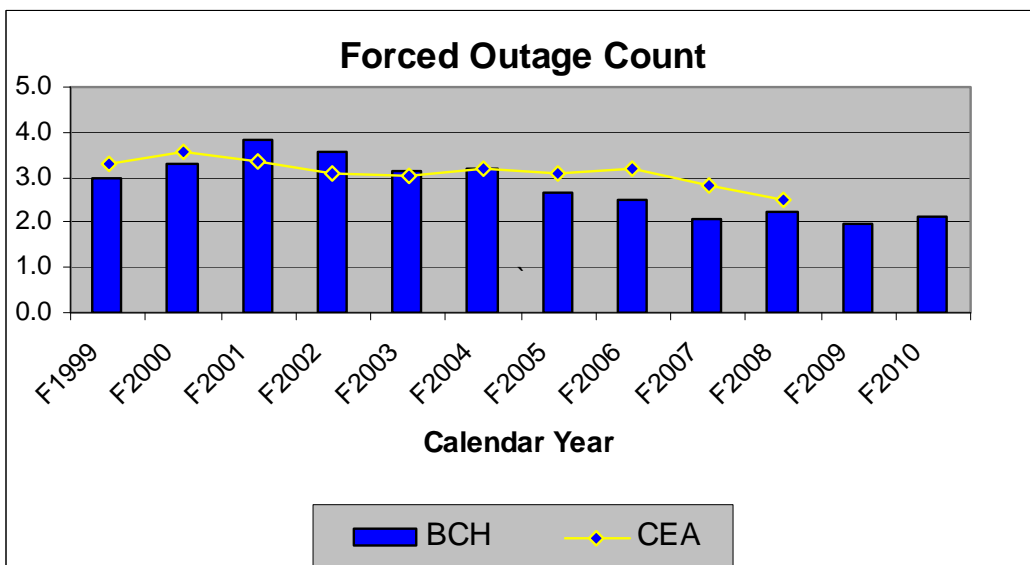
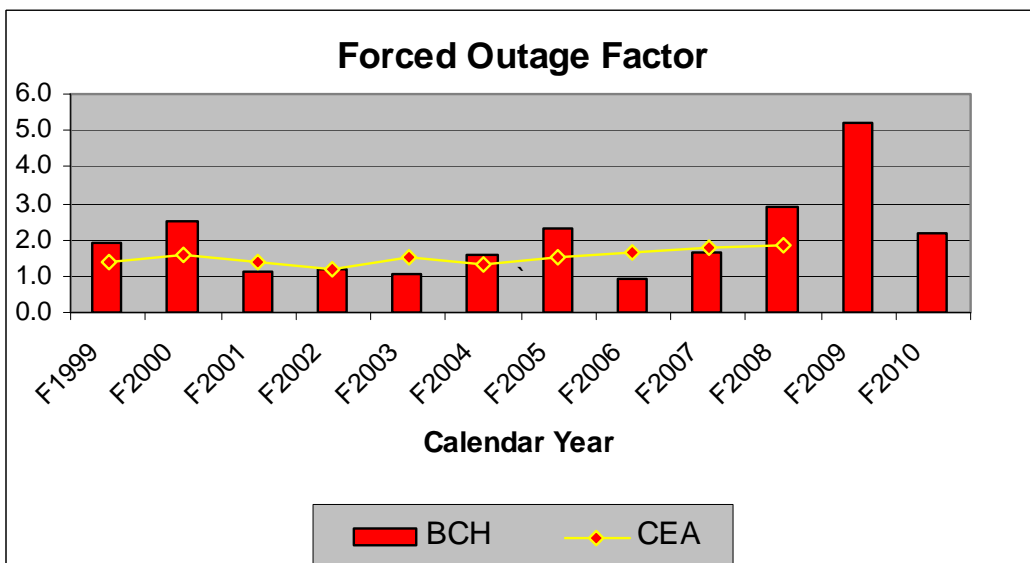
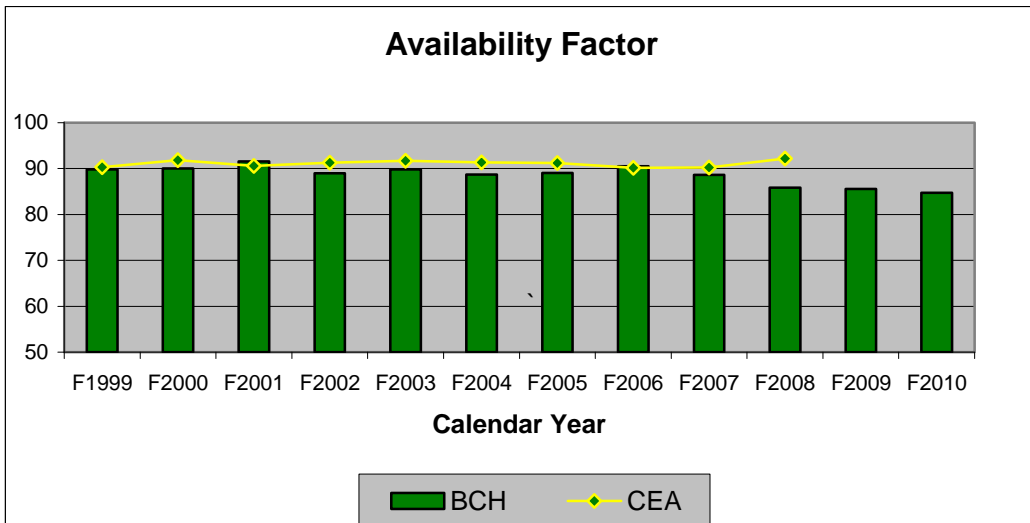
Forced Outage Factor = $\frac{\text{Forced Outage Time (including Starting Failures)(Internal)}}{\text{In Commercial Service Time}}$

Failure Rate = $\frac{\text{Forced Outage Count (excluding Starting Failures)(Internal)}}{\text{Operating Time X In Commercial Service Time}}$

* In Commercial Service Time represents the number of hours in the measurement period that the unit(s) were considered part of the active fleet.

** Outages with causes that were external to Generation, such as Transmission System forced outages, are excluded from this measure.

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